

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014587**Date Inspected:** 02-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

This QA Inspector observed the following work in progress:

BAY 11:

SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040724041271. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-10-119M-1-31, 32, 25, 26, ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113.

This QA Inspector observed ZPMC qualified welding personnel identified as 040675, 040656. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ND1-STSA4-10-119M-1-52, 58, ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-4113-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040675, 040656. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ND1-STSA4-10-119M-1-57, 51, ZPMC QC

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Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113.

This QA Inspector observed ZPMC qualified welding personnel identified as 046709. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ND1-STSA4-6-127M-2-75, 76, 61, 62, ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2112.

This QA Inspector observed ZPMC qualified welding personnel identified as 251194, 040614. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ND1-STSA4-10-119M-2-43, 41, Z42, 44, ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113 and WPS-B-T-4113-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 046769, 046704, Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-10-119M-2-41, 43, 42, 44, ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113 and WPS-B-T-4113-1.

Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 044541, Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as WD1-STSA4-5-127M-1-48A/B. ZPMC QC Identified as Xu Jie, with Temporary welding repair report WRR-T-WR3283, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-485-SMAW-2G (2F)FCM-Repair-1. For more information see below attach photo number 1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040619, Perform Shielded Metal Arc Welding (SMAW) on West Tower lift 5 Grillage Plate. Joint identified as WSD1-TL5-4B/K-11A. ZPMC QC Identified as Libin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-B-U3b.

Repair Welding, FCAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040759, Perform Flux Core Arc Welding (FCAW) on East tower lift 3 Skin B Stiffener. Plate identified as LS3-45, buttering 4mm. ZPMC QC Identified as Zhao Mao Mao, with Temporary welding repair report WRR-T-WR3330. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-3G (3F)-Repair.

Repair Welding, FCAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 049220, 053316, Perform Flux Core Arc Welding (FCAW) on 9M outside Diaphragm. Plate identified as SD1-A6, buttering 9mm both side of plate. ZPMC QC Identified as Shao Hai Lang, with Temporary welding repair report WRR-T-WR3329. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-2G (2F)-Repair. For more information see below attach photo number 2.

BAY 11:

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During random visual inspection in Bay 11, this Quality Assurance Inspector (QA) discovered the following issue: Qualified Welder welding on a Tower strut with expired Welding Procedure Specification (WPS). The welds are identified as ED1-STSA4-10-119M-1-31, 32, 25, 26; fillet weld Using WPS-B-T-2113, And ND1-STSA4-10-119M-1-58, 52, 57, 51; fillet weld Using WPS-B-T-4113-1. Tower Strut identified as, ED1-STSA4-10-119M-1, and ND1-STSA4-10-119M-1. The member is located in Bay#11, These Tower Strut Were doing welding this QA Inspector observed that WPS is not valid. This weld is designated as Seismic Performance Critical Member (SPCM).

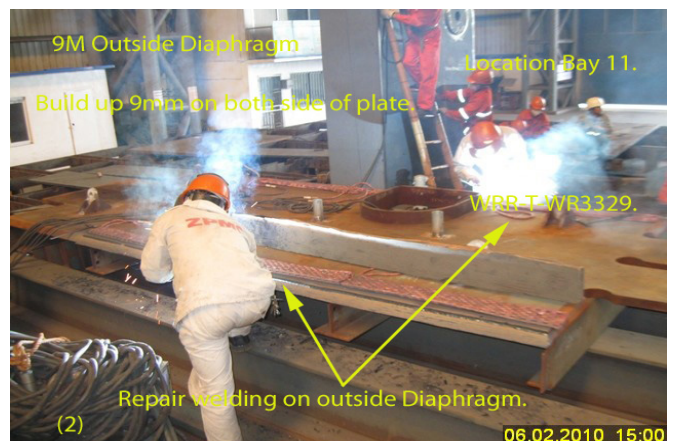
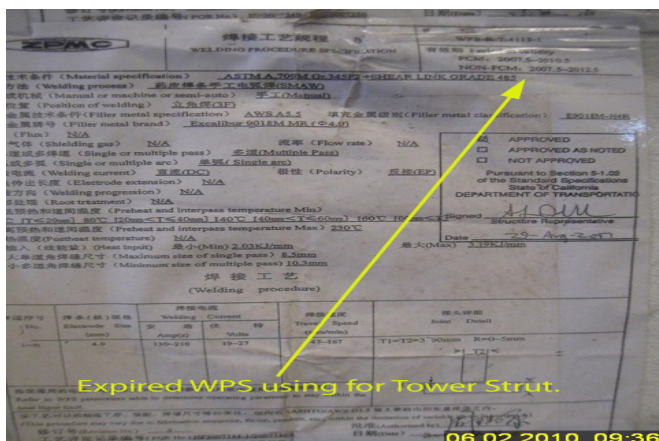
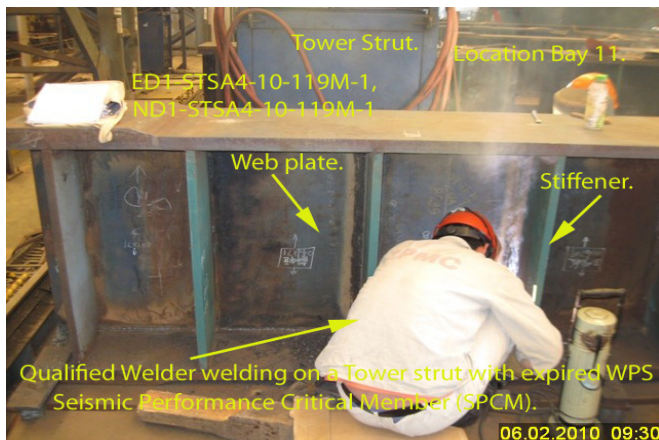
Following WPS using for Tower Strut welding are not valid, for details see below list.

- 1) WPS-B-T-2113,
- 2) WPS-B-T-4113-1,
- 3) WPS-B-T-2112,
- 4) WPS-B-T-3212-TC-U5b-1,

- These WPS expiry date is – 2010-05.

Incident report to be generated, for further information, please see the attached pictures:

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



Summary of Conversations:

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Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Skyler Guest phone: 15000422360, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Shailesh
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Quality Assurance Inspector

Reviewed By:	Clifford,William
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QA Reviewer
